

Scatter Plots and Regression (prediction) Lines

1. Entering Data

- a. **[STAT]** → **EDIT** → **Edit** **[ENTER]**

```

EDIT TESTS
1:Edit...
2:SortA(
3:SortD(
4:ClrList
5:SetUpEditor
    
```

- b.

L1	L2	L3	1
-----	-----	-----	-----
L1 =			

Enter the x -values in L1 and y -values in L2

- c. **[2nd]** **QUIT**

To clear a List:

1. Go to the top of list.

L1	L2	L3	1
-----	-----	-----	-----
L1 =			

2. **[CLEAR]** **[ENTER]**

Note: Do not delete lists.

In order to get deleted lists back you must do the following:

[STAT] → **SetUpEditor** **[ENTER]** **[ENTER]**

This should restore your lists.

2. Finding the Prediction Line (Model)

- a. **[STAT]** → **Calc** → **LinReg(ax+b)** → **[ENTER]**

```

EDIT TESTS
1:1-Var Stats
2:2-Var Stats
3:Med-Med
4:LinReg(ax+b)
5:QuadReg
6:CubicReg
7:QuartReg
    
```

- b. After **LinReg(ax+b)** you will need to type the list the x -values are located (usually L1) followed by a comma and the list where the y -values are located (usually L2) followed by another comma and then the location you want to store the equation (usually Y1). After all is typed in hit **[ENTER]**

```

LinReg(ax+b) L1,
L2, Y1
    
```

Y1 thru Y9 can be located by doing the following:
[ALPHA] → **[F4]** or **[VARS]** → **Y-VARS** → **Function**

- c. You should get the following.
 a is your slope and b is your y -intercept.
 Thus your equation is $y = 2.75x - 5.75$.

```

LinReg
y=ax+b
a=2.75
b=-5.75
    
```

3. Using the model to predict

a. $\boxed{\text{ALPHA}} \rightarrow \boxed{\text{F4}} \rightarrow Y1 \rightarrow \boxed{\text{ENTER}} \rightarrow Y1(n) \rightarrow \boxed{\text{ENTER}}$

or

$\boxed{\text{VAR}} \rightarrow Y\text{-VAR} \rightarrow \text{Function} \rightarrow Y1 \rightarrow \boxed{\text{ENTER}} \rightarrow Y1(n) \rightarrow \boxed{\text{ENTER}}$

4. Graphing Data – We do not normally do this step, unless asked to see how well the data fits.

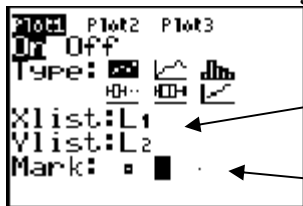
a. Clear all equations from $\boxed{\text{Y=}}$ that do not pertain to the problem at hand.

b. $\boxed{\text{2nd}}$ STAT PLOT

c. Select on of the Stat Plots



d. Make sure the following is selected.



Note: If your x - or y -values are in a different list location you can always change the XList: and YList: locations typing in the new list location.

You can change your mark to your preference.

To select put cursor on top of item and hit $\boxed{\text{ENTER}}$

e. $\boxed{\text{2nd}}$ QUIT

f. $\boxed{\text{ZOOM}}$ \rightarrow ZoomStat